MODIS TECHNICAL TEAM MEETING

Building 33, Room E125
June 15, 2000

Vince Salomonson chaired the MODIS Technical Team Meeting. Present were Bill Barnes, Francesco Bordi, Barbara Conboy, Wayne Esaias, Bruce Guenther, Dorothy Hall, Steve Kempler, Ed Masuoka, Harry Montgomery, Bob Murphy, Mike Roberto, Dan Tarpley (NOAA), and Eric Vermote, with David Herring recording the minutes.

1.0 SCHEDULE OF EVENTS

COSPAR 2000 Warsaw, Poland	July 16–23, 2000
COSPAR/IRS Joint Symposium Warsaw, Poland and St. Petersburg, Russia	July 21 and July 24, 2000
IGARSS 2000 Honolulu, HI	July 24–28, 2000
IRS-2000 St. Petersburg, Russia.	July 24–29, 2000
EOS/SPIE Symposium on Remote Sensing Barcelona, Spain	September 25–29, 2000
SPIE's Remote Sensing Japan 2000 Sendai, Japan	October 9–12, 2000
VENICE-2000 (Oceans from Space) Venice, Italy	October 9–13, 2000
Ocean Optics XV Monaco	October 16–20, 2000
PORSEC 2000 Goa, India	December 5–8, 2000
AGU Fall Meeting San Francisco, CA	December 15–19, 2000
Aqua Launch	December 21, 2000

2.0 MINUTES OF THE MEETING

2.1 Instrument

Guenther presented information on MODIS Terra showing that the cold Focal

Plane Arrays (FPA's) are warming up about 25mK per day. We should have a 2K margin, so SBRS is looking into this issue. The problem may be due to cooler contamination. Guenther said MODIS shows a decrease in gain for the PC bands as the sensor warms. However, the Band 27 gain increases, which is a problem.

Roberto and Barnes are working on a memo regarding the Band 31/32 gain change. The recommendation is that Tmax should be set at 340K for both, which would optimize the total dynamic range. There was a discussion of the exact wording to make sure the science goals are met. Salomonson said the memo should describe 1) history of why its not on FM1, 2) why it needs to go from 400 to 340, and 3) what happens if we do not change it. How would we deal with that scientifically? We need a viewgraph explaining the ratios of 400 to 340 and what the consequences would be if those ratios are not used. Esaias took an action to bring a group of charts that delineates these issues to the next Tech Team meeting. He said he would make it clear that the coding error does not fix entire problem.

Esaias showed the group a view graph of detector 5, Sea Surface Temperature, (SST) measurements, before and after correction. The conclusion is that corrected RVS code removes obvious contamination at high angles of incidence and indicates that a problem likely remains and is likely in the Atmospheric correction code. Esaias said that they are examining whether the SST algorithm is at fault, or there is a coding error or a problem in the look-up table (LUT) for coefficients. Guenther commented that we would not know the true RVS without a deep space maneuver. Esaias said the RVS problem is more symmetrical and there is a distinct dependence upon mirror side differences. This problem is improving, however more needs to be done about it. Guenther said we still need to determine how the instrument responds as a function of scan angle. This might be determined through vicarious calibration or a deep space maneuver. There should be very small differences, detector to detector, because each looks at the onboard Black Body. Guenther expressed a concern that there is a modest difference in linearity between channels.

Salomonson asked whether there was any progress on the issue of going from side A to B. Esaias said that he had drafted a position statement on that issue. He said he would send it to Salomonson as soon as he incorporated comments from Guenther and Murphy. He said his statement delineates benefits versus impact if its not done.

Montgomery reported that we can assess X talk well with SRCA, but they only have data for 1 day. He said he would bring charts on this topic to a Tech Team meeting. They ran radiometrics around orbit and can model how SRCA changes around orbit. MODIS is not changing at all for most bands. Vermote asked whether the MODIS team could help in the detector equalization process. Montgomery replied yes, for Band 2 with the sinusoidal detector, SRCA saw the same thing. He said that the gains for equalization for getting the same signal out of all detectors need to be reassessed; or we could do that in s/w.

2.2 GDAAC

Kempler reported that they are still having problems with not receiving EDOS data. He said that the DAAC has the same amount of L1 and L0 data as what came in from EDOS. Masuoka said that a meeting with Yoram Kaufman and Jon Ranson has been planned to discuss the EDOS data flow issue. EDOS said they would talk with MODAPS and the DAAC's about plans to deal with this issue and progress in implementing them. Murphy said that Vanessa has sent out a summary status statement. He asked what the prognosis is on EDOS data flow and filling in the gaps. Kempler replied that he does not know yet. He noted that the first release of MISR data is scheduled for the end of June.

Kempler said that they are narrowing the L2 subsetter and sending data down to LaRC for X instrument science. A new version of cloud mask (PGE03) is scheduled for delivery to the DAAC next week. After it goes through the SSI&T process, the DAAC will run cloud mask again.

Kempler said he had informed the MODIS team on Friday (June 9) of a database upgrade at the DAAC. He said the DAAC would be down for about 12 hours, at most. He asked the MODIS team to notify the DAAC regarding requests to complete or delay processing. Also, the ECS Drop 5B is scheduled for delivery to the DAAC at the end of July.

2.3 SDST

Masuoka said that EDOS has both White Sands and Goddard components. He is trying to understand the data flow from White Sands to MODIS. One question is when there are EDOS data gaps, where are the tapes. EDOS does a day every 2 days. GDAAC has ingest technicians who look at incoming data then fill ingest requests to fill holes in the data flow. EDOS promises that if there is a need to catch up there would be a steady stream of data through the DAAC. If there are problems with huge data gaps, then the priorities are to do 2 to 3 days. Day 137 has 3 hours missing at EDOS and 20 hours missing at L1.

Masuoka said that his group is finding that L1A has a production rule issue. When there is a data gap, we cannot run the next 2 hours. He is reviewing that issue. Sometimes when EDOS thinks it is done, GDAAC needs to prompt them to revisit the issue. Masuoka said that EDOS would eventually catch up and process the unprocessed data. He said that when White Sands was caught up, EDOS was 12 to 14 days behind, GDAAC had all but 14 days of data (caught up), and MODAPS is 21 days behind.

In response to a question about whether the missing data were randomly distributed, Masuoka said no. Earlier there were some bit flip issues, now data gaps are tape recorder and hardware related. He said that it looks like we will gain 7 days by Monday (June 19). Esaias asked about what would happen when we are missing crucial validation period data. Masuoka replied that we would go back and get that data. He said that if the GDAAC has the data, then it is in a good position to make it now for those periods.

Masuoka showed the group the proposed baseline per year for both Terra MODIS and Aqua MODIS. He said the 2/96 L2 + storage was 228 gigabytes per

day and the 2/00 L2 + storage is 606 gigabytes per day. This was doubled for Aqua MODIS. The 2/96 ingest was 1x and the 2/00 ingest is TBD. The baseline should be 2.25x by 2001 and 6x by 2003. Masuoka said we probably want to do reprocessing of the entire year in 3 to 4 months and reprocess all previous years.

Masuoka said there was not yet an agreement on the fills for nonfunctioning detectors. Esaias said that Michael King recommended setting a flag and Salomonson agreed that would be advisable. Murphy commented that the Land group recommended using interpolated value and Paul Menzel recommended using a fill value for making images, and a flag for science.

Guenther said he objects to using the fill value because that would be artificial. He took an action to circulate his recommendations to the Discipline Leaders on plans to flag and fill dead detectors. Responses from Discipline Leads are needed by this time next week.

2.4 NOAA

Tarpley said that NOAA still is processing everything up to L1B, but no higher level products. He said that they are running more slowly than expected.

2.5 MAST

Conboy reported that the view graphs from the MODIS Science Team presentations were being posted on the MODIS Web Site at: http://modis.gsfc.nasa.gov/MODIS/ under the "Meetings" section. She said that 2000 MODIS posters were printed. MAST plans to send posters to MODIS Science Team members.

Conboy told the group that Michael Hohner is leaving the MODIS Administrative Support Team. His last day is June 21. Please submit any documents or images for MODARCH to: efs@modarch.gsfc.nasa.gov. Kevin Ward will serve as the interim Digital Librarian/System Administrator for MODARCH until a replacement is found and he will look for submitted documents and images on the efs account (above). Barbara Conboy (barbara.l.conboy.1@gsfc.nasa.gov) can also be contacted regarding comments or questions about MODARCH.

3.0 ACTION ITEMS

3.1 New Action Items

1. Esaias: Prepare a group of charts for the next MODIS Technical Team meeting that delineates the relevant issues related to the Band 31/32 gain change and the recommendation that Tmax should be set at 340K for both bands.

2. Guenther: Circulate recommendation to Discipline Leaders on plans to flag and fill dead detectors. Responses from Discipline Leads are needed by this time next week.

3.2 Action Items Carried Forward

1. MODIS Science Team: Send updates on MODIS metadata terms/valids to Skip Reber (reber@skip.gsfc.nasa.gov). These are terms that enable users to search MODIS data. This is part of a request to the Terra Instrument teams to update metadata terms.

Status: This action is open.

2. Discipline Leads: Send feedback to Murphy and Guenther on setting flags for dead (non-functional) detectors while they are set to zero. Currently, MCST would like MODIS Science users to provide feedback on which detectors are dead.

Status: This action is open (see new action item #1, above).

3. Discipline Leads: Send MODIS Data Product table updates to Reber with a copy to Murphy. The MODIS Data Products table is on the Web at: http://eosdatainfo.gsfc.nasa.gov/eosdata/terra/modis/modis_dataprod.html

Status: This action is open.

4. Masuoka: Submit an EOS-PM Data Product Update to ESDIS.

Status: This action item remains open.